

ABSTRACT OF THE DISCLOSURE

[0149] A system and method for performing a magnetic imaging, optical profiling, and measuring lubricant thickness and degradation, carbon wear, carbon thickness, and surface roughness of thin film magnetic disks at angles that are not substantially Brewster's angle of the thin film (carbon) protective overcoat. A focused optical light whose polarization can be switched between P or S polarization is incident at an angle to the surface of the thin film magnetic disk. This present invention allows the easy measurement of the change in lubricant thickness due to the interaction of the thin film head, the absolute lubricant thickness and degradation of the lubricant. It also allows the measurement of changes in carbon thickness and the absolute carbon thickness. The surface roughness can also be measured at any of the angles specified above. The rotation of the reflected polarized light can be measured to identify the Kerr-effect, and accordingly, the magnetic property of the point at which the light reflects from the disk. In addition, the present invention can mark the position of an identified defect (for example) by automatically positioning a scribe in close proximity to the target position, e.g., the position of the defect, and marking the disk with the scribe.

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